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# Governance of Marine Protected Areas in East Africa: A Comparative Study of Mozambique, South Africa, and Tanzania

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*Marine protected areas (MPAs), including MPA networks, have become an indispensable tool for marine conservation. This article undertakes a comparative discussion of the domestic governance frameworks of Mozambique, South Africa, and Tanzania in view of the efforts of these three states to scale up their MPA cooperation in the East African Marine Ecoregion (EAME) to include MPA networks, including transboundary MPAs. Although on many issues there appears to be regional solidarity and convergence on principles, including participatory processes and decision making to guide MPA making, there are significant differences on lead roles, institutional structures, access to public information, and conflict management, among others, which would need to be factored in MPA cooperation. Other important factors for regional MPA cooperation include policy directions on shared concerns such as conservation and development values with emphasis on equitable resource use and poverty alleviation.*

**Keywords** East Africa, marine protected area, Mozambique, South Africa, Tanzania

## Introduction

States parties to the 1992 Convention on Biological Diversity (CBD)[1] committed through a 2004 decision of the Conference of the Parties (COP) to achieve effective protection of 10% of marine ecoregions by 2012.[2] Wells, Burgess, and Ngusaru (2007) recently reviewed the status of marine protected areas (MPAs) in East Africa and reported considerable progress concerning protection of the continental shelf. They suggested that Kenya, Mozambique, and Tanzania could reach their target commitments by 2012. South Africa has also been reported as achieving significant progress, with designations of as many as 20 MPAs (South Africa 2008). However, as Wells, Burgess, and Ngusaru (2007) noted: "There is a risk that focusing on increasing the area under protection could have a negative impact in terms of reducing management effectiveness of existing MPAs" (at 80). In other words, there is a danger that, while pressure to meet the CBD target percentage mounts, states might not meet the corequirement of effective management.

In addition to domestic MPA initiatives, regional initiatives to establish MPA networks are needed in response to the 2002 World Summit on Sustainable Development's call for a global system of MPA networks[3] and also to further assist meeting the CBD target for marine ecoregions (Fifth World Parks Congress 2003; World Conservation Congress 2008; World Summit on Sustainable Development 2002). There is growing attention on the need for greater transboundary marine conservation efforts in the East African Marine Ecoregion (EAME). The United Nations Environment Programme (UNEP) Regional Seas Programme for East Africa has a 1985 Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region,[4] the implementation of which is overseen by a Group of Experts on Marine Protected Areas in Eastern Africa (GEMPA-EA). The World Wildlife Fund (WWF) established the EAME program that aims at 10% of each state's marine area to be under MPA cover and to which South Africa and Tanzania have made commitments (WWF 2004). There is growing awareness among East African states of the need to adopt a systemic approach to MPA designation and management in the interests of conservation of the EAME which they all share (UNEP/WCMC 2008, at 57). There is already interest in transboundary MPAs.[5] A systemic approach to protecting the EAME necessarily involves the use of tools such as MPA networks and transboundary MPAs covering substantial areas of the coastal and maritime zones of regional states.

Clearly, regionalism of this type requires a high degree of bilateral and multilateral cooperation in undertaking, coordinating, and implementing MPA-making commitments. An essential aspect of MPA making at the national level (and at any level for that matter) is the governance framework; especially, a solid domestic legal foundation to support MPA

establishment and management (Kelleher 1999; Pomeroy, Parks, and Watson 2004; Sanders and Cochrane 2006). Where MPA cooperation has an international dimension, such as in the case of a transboundary MPA, the governance framework needs to include a bilateral or coordinated legal arrangement (Kelleher 1999). A proper domestic and bilateral governance framework provides legitimacy and is the springboard for planning, implementation, management, and enforcement—all essential elements of effectiveness.

This article undertakes a comparative discussion of the domestic governance frameworks of Mozambique, South Africa, and Tanzania in view of the efforts of these three states to scale up their MPA cooperation in the EAME to include MPA networks, including transboundary MPAs. The geographical focus is on two areas in the border regions between Mozambique and Tanzania and Mozambique and South Africa (see Figure 1). More specifically, the discussion is guided by two critical questions: (1) Given the prospect of international MPA cooperation in their border regions, are their respective governance frameworks coherent and sufficiently in harmony to facilitate cooperation? and (2) Are there gaps in those frameworks and, if so, what are they and could they constrain transboundary MPA cooperation?

## Comparative Assessment

Although the needs of governance of MPAs are well understood, there is less of a clear understanding of the governance demands of MPA networks, including transboundary MPAs. On the one hand, as long as the MPAs concerned work together to achieve common goals, "the sites do not necessarily have to be managed in the same way" (UNEP/WCMC 2008, at 8). However, principles of good governance for MPA networks have yet to be identified and there are no indicators to measure network success in reducing biodiversity loss (UNEP/WCMC 2008). Clearly, whatever the governance framework of a transboundary MPA, such a framework would be influenced by the respective national governance structures in the cooperating states because of the sovereignty issues involved (UNEP/WCMC 2008).

While being cognizant of the lack of guidance on governance principles, structures, and processes for the establishment of international MPA networks and transboundary MPAs, we assembled a composite analytical framework drawing from the literature on integrated coastal and ocean management (ICOM) and MPAs. MPAs are increasingly considered important tools for ICOM (Cicin-Sain and Belfiore 2006; Ehler 2006). Literature on international relations theory (in particular, regime theory) was also used to consider aspects of the international bilateral relations between the three states. The resulting composite framework includes 12 criteria considered useful for a discussion of comparative governance, and which are used as the basis for comparative analysis.

### *Common International Legal Commitments*

Determination of the extent to which the three states are parties to the same instruments and members of the same international organizations is important. Prima facie this indicates the presence of convergent and mutual expectations on the accepted international principles, norms, rules, and procedures of the international regimes to which they subscribe (Keohane 1984). Mozambique, South Africa, and Tanzania are parties to important international environmental law instruments relevant or useful for MPA making, but not necessarily to all of them. These instruments can be considered in two categories: (1) instruments that




**Figure 1.** Transboundary Networks of Marine Protected Areas for Integrated Conservation and Sustainable Development: Biophysical, Socio-Economic and Governance Assessment in East Africa (TRANSMAP) study areas: Mozambique/Tanzania and Mozambique/South Africa border areas. (*Source:* TRANSMAP, available at http://www.transmap.fc.ul.pt.)

specifically provide for protected areas, and (2) instruments that provide tools that can be used for the management of protected areas.

Under the first category, the three states are parties to the following conventions, which are all in force: the 1971 Convention on Wetlands of International Importance, especially as waterfowl habitats relevant for the establishment of Ramsar sites;[6] the 1992 Convention Concerning the Protection of the World Cultural and Natural Heritage,[7] relevant for the establishment of World Heritage sites; the 1982 United Nations Convention on the Law of the Sea (UNCLOS),[8] which provides for the adoption of special mandatory measures addressing vessel source pollution in special areas in exclusive economic zones (EEZs); and the 1992 Convention on Biological Diversity, relevant for in situ conservation.[9] There are other instruments belonging to this category where the pattern of adherence by these three states is checkered at best. Mozambique is not a party to the 1979 Convention on the Conservation of Migratory Species of Wild Animals,[10] nor the 1995 Agreement on the Conservation of African-Eurasian Migratory Waterbirds,[11] unlike South Africa and Tanzania. None of the three states is a party to the 2001 United Nations Educational, Scientific and Cultural Organization (UNESCO) Convention on the Protection of the Underwater Cultural Heritage, which recently entered into force.[12]

Under the second category, the practice of the three states varies even more. The three states are all parties to only two instruments, the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),[13] and the 1973 International Convention for the Prevention of Pollution from Ships, as modified by the 1978 Protocol to the International Convention for the Prevention of Pollution from Ships (MARPOL 1973/78)[14] relating thereto. MARPOL sets out global standards for the discharge of a wide range of operational pollution from ships. More significantly for the protection of sensitive marine ecosystems, MARPOL provides for the designation of special areas within which higher standards can apply for discharges from international shipping of oily residues (Annex I), noxious liquid substances (Annex II), and garbage (Annex V). MARPOL also regulates the discharge of sewage from the nearest land (Annex IV) and emission control areas for certain pollutants released atmospherically (Annex VI). High vessel source pollution standards are beneficial for MPAs located in the midst or in the vicinity of international maritime trade routes, as is the case of East African MPAs. Although all three states are parties to MARPOL, their subscription to the optional Annexes III–VI is disparate. Whereas all three are bound by mandatory Annexes I and II, subscription to the other annexes is inconsistent. Mozambique and Tanzania are parties to Annexes III to V; although a party to Annexes III and V, South Africa is not a party to Annex IV; none of the three states is yet a party to Annex VI. The consequence is that, although the three states are in a position to secure higher standards for certain types of vessel source pollution, they are not in a position to do so in relation to all vessel source pollution and to implement such standards. Moreover, the three states have not taken steps to secure from the International Maritime Organization (IMO) the designation of EAME marine areas (especially candidates for MPAs) as special areas under those MARPOL annexes to which all three states are parties (in particular, Annexes I, II, and V providing for special area designation). This is unfortunate because the designation of EAME marine areas as zero discharge zones (e.g., for oily wastes and garbage) would provide additional protection for marine species and marine avifauna vulnerable to these types of pollution.

Unlike South Africa, Mozambique and Tanzania are not parties to several other international instruments that are important for ocean management and MPAs. Considering the presence of a variety of cetaceans in the EAME region, the nonsubscription to the 1946 International Convention for the Regulation of Whaling[15] stands out. They are also

not parties to the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (as amended) (the London Convention).[16] The London Convention is potentially useful in controlling various discharges into the marine environment that could have deleterious impact on MPAs. Similarly, only South Africa is party to the International Law Commission (ILC)'s 1997 Convention on the Law of Non-Navigational Uses of International Watercourses,[17] which is a useful instrument for the control of upstream discharges in international watercourses that could have downstream coastal zone impact. Inexplicably, South Africa is not a party to the 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation,[18] which provides a framework for cooperation in oil spill contingency planning and response, a shared concern of all three states given the location of one of the world's major navigation routes just off their coasts.

Although there appears to be uniform adherence to key regional political and economic and some environmental agreements, the three states' patterns of ratification of other relevant regional instruments are inconsistent. All three states are parties to the 1985 UNEP Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region[19] and the 1985 Nairobi Wildlife Protocol.[20] The three states are parties to the 2000 Constitutive Act of the African Union,[21] the 1991 Treaty Establishing the African Economic Community,[22] and the 1992 Treaty of the Southern African Development Community,[23] including the latter's Protocol on Wildlife Conservation and Law Enforcement,[24] and the Protocol on Fisheries.[25] Support for other important regional environmental and conservation agreements is not as consistent. For example, Mozambique and Tanzania are parties to the 1968 African Convention on the Conservation of Nature and Natural Resources;[26] South Africa is not a party. This instrument was revised in 2003,[27] is not yet in force, and none of the three states is yet a party to the revised convention. While South Africa and Tanzania are parties to the 1994 Lusaka Agreement on Co-Operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora,[28] Mozambique is not.

At the subregional and bilateral level, all three states have significant experience with domestic marine and transboundary protected areas and resource conservation cooperation with neighbors, albeit mostly in relation to terrestrial parks.[29] There are several recent agreements between Mozambique and South Africa (including Swaziland and Zimbabwe) concerning Limpopo transfrontier conservation and resources that indicate experience with the diplomatic and management processes to enable the establishment of this close form of cooperation.[30] In 2000 Mozambique, South Africa, and Swaziland adopted the Protocol on the Establishment of the Lubombo Transfrontier Conservation and Resource Area.[31] Five transfrontier conservation and resource conservation areas (TFCAs) have been established, one of which overlaps with the future transboundary MPA area between Mozambique and South Africa. This project establishes the Lubombo Ponta do Ouro-Kosi Bay Marine and Coastal Transfrontier Conservation and Resource Area. Although there are in effect five TFCAs focusing on different geographical areas under the 2000 Protocol, they are jointly planned and managed by the Trilateral Lubombo Commission. Mozambique has also cooperated with Tanzania in relation to the Niassa-Selous wildlife corridor and with Zimbabwe and Zambia in other transfrontier reserves. The World Bank-funded projects for Mnazi Bay-Ruvuma Estuary Marine Park and Quirimbas National Park provide further experience more directly related to the transboundary MPA candidate area between Mozambique and Tanzania. South Africa has transboundary park agreements with Botswana concerning the Kgalagadi Transfrontier Park[32] and Namibia on the |Ai-|Ais/Richtersveld Transfrontier Park.[33]

The three states have other bilateral agreements with neighboring states addressing resources and environmental concerns shared across boundaries. There are several commissions that are tasked with the joint management of international watercourses and river basins to which the three states are party, including: the Incomati-Maputo Agreement between South Africa, Mozambique and Swaziland;[34] the Orange-Senqu Commission concerning South Africa Botswana, Lesotho and Namibia; the Pungwe River Basin water commission between Mozambique and Zimbabwe; the cooperative arrangements between Tanzania and its neighbors in relation to Lakes Malawi/Nyasa, Tanganyika, and Victoria; and the ongoing work on the establishment of the Zambezi River Basin commission involving eight countries, among which are Tanzania and Mozambique. All three states are signatories to the 2000 South African Development Community Revised Protocol on Shared Watercourses.[35]

The relevance of subregional or bilateral transboundary cooperation agreements lies in the experience that the three states have accumulated from the establishment and management of permanent transboundary resource conservation arrangements with their neighbors. Although the transboundary conservation cooperation experience is fundamentally terrestrial, there is some similarity in the political, diplomatic, legal, institutional, and management challenges to be encountered in the establishment of transboundary MPAs. Most importantly, the extensive diplomatic experience outlined above is evidence of political commitment by the three states to further cooperate on transboundary conservation.

### *Implementation of International Legal Commitments*

Where the three states are parties to the same international instruments, each state is expected to exercise its rights and duties within those regimes by implementing its protection and conservation-related commitments at the national level. Implementation is expected to occur through a range of measures, including policy change, institutional development, legislation, allocation of resources, and so forth (Mann Borgese, Chircop, and Pereira 1990). In particular, attention needs to be paid to the application of important generally accepted principles governing sustainable development, ecosystem-based management, participatory approaches, and precaution, among others, that may be considered useful for MPA making. A question to consider is the extent to which the three states adopted a "principled" approach. All three states have formal stated policy, legislated commitments, or both concerning the implementation of international environmental legal obligations and have tended to follow up on those commitments to different extents and in various ways.

Tanzania's National Environmental Policy objectives specifically include the promotion of international cooperation, including bilateral, and implementation of international conventions (TZ NEP 1997). Its Environmental Management Act is an important instrument implementing international environmental instruments to which Tanzania is a party (TZ EMA 2004). Similarly, in South Africa, international environmental law not only informs the state's environmental law, but also obligates the state to conform to its international legal obligations (SA MLRA, 1998; SA NEMA 2003, Chapter VI; SA NEMA/ICMA 2008). South Africa has used a range of policy and legislative instruments in implementing its international environmental commitments. For example, the 1972 World Heritage Convention[36] was incorporated as an annex to the World Heritage Convention Act and iSimangaliso Wetland Park (formerly known as Greater St. Lucia Wetland Park) was designated as a World Heritage site under this instrument (SA WHCA 1999). Mozambique's Environmental Law, though not referring explicitly to international obligations, assumes international cooperation as one of its fundamental principles, recognizing its role in producing solutions

to transboundary and global environmental problems (MZ EL 1997). Mozambique's Environmental Law implemented the legal instruments produced by the 1992 United Nations Conference on Environment and Development (UNCED) within 5 years of their adoption.

International environmental law principles, norms, and rules that help guide transboundary MPA making appear in the legislation of the three states. In this respect, the three states appear to be pursuing a principled approach to marine conservation, although their implementation efforts vary. South Africa's National Environmental Management Act is founded on key modern and comprehensive principles that include: sustainable development, a human right to a decent environment, a citizen's legal standing to challenge environmental issues, intergenerational equity, environment as a public trust, integration, precaution, pollution prevention, the polluter pays principle, local-level governance, ecosystem-based management, and common but differentiated responsibilities (SA NEMA 2003, Chapter I). All of these principles stem from UNCED and other international arenas. The common but differentiated responsibilities principle should be of particular interest to neighboring Mozambique, which is significantly less developed than South Africa, in its joint marine conservation efforts. South Africa's Integrated Coastal Management Act "interests of the whole community" include: "a long-term perspective that takes into account the interests of future generations in inheriting coastal public property and a coastal environment characterised by healthy and productive ecosystems and economic activities that are ecologically and socially sustainable" (SA NEMA/ICMA 2008, section 1). Precaution has a place in the Marine Living Resources Act (SA MLRA 1998). The Biodiversity Act, which implements South Africa's international obligations concerning conservation, provides for ecosystem protection and management and defines bioregions to include the marine environment (SA NEMA/BA 2004, sections 1 and 5). Biodiversity management plans must be aimed to ensure long-term survival of ecosystems and species (SA NEMA/BA 2004, section 45).

Given the recent socioeconomic history of South African fisheries and coastal communities, a balance has had to be struck between development and redistribution of access to resources on the one hand and conservation on the other. South Africa's environmental and fisheries legislation recognizes that poverty alleviation and improving living standards are prioritized goals. Hence, rather than taking a rigid approach to the implementation of international principles, the fisheries legislation attempts to achieve a balance between the need to conserve ecosystems and species, and the need to provide access to fishery resources to poor coastal communities. The reality of post-apartheid South Africa is that there is an urgent requirement to provide greater equity of access to the nation's natural and economic wealth as much as to conserve and use resources on a sustainable basis (Van der Elst et al. 1997). Other important statutes implementing South Africa's international commitments include the Environment Conservation Act, the National Parks Act, and the World Heritage Convention Act (SA ECA 1989; SA NEMA/BA 2004; SA NPA 1976; SA WHCA 1999).

Tanzania similarly invokes international principles in its legislation and policy documents. The National Environmental Policy draws heavily on sustainable development thinking and intergenerational equity (TZ NEP 1997). The National Forest Policy is inspired by the CBD in providing for biodiversity conservation at the genetic, species, and ecosystem levels (TZ NFP 1998). However, it appears that Tanzania has not always legislated important treaty provisions where one would expect this to occur. For example, it can be noted that CITES[37] provisions have not been incorporated in the Marine Parks and Reserves Act, even though marine parks and reserves under the act are no-take zones (TZ MPRA 1994).

Mozambique has likewise implemented several global international conventions in its legislation, including ones on biodiversity, desertification, and wetlands. Some of these conventions provide a basis for the development of specific legislation or policies such as the Nairobi Convention,[38] which provides a foundation for the national strategy for the protection and development of the coastal zone. Similarly to Tanzania and South Africa, Mozambique's constitution and environmental law incorporate rights and duties of its people in relation to the environment (MZ Constitution 2004; MZ EL 1997). However, it is clear that Mozambique's implementation efforts have been hampered by a lack of technical and research capacity, insufficient interinstitutional coordination, bureaucratic obstacles, language constraints, lack of access to usable public environmental information, illiteracy, insufficient public understanding and support, lack of financial resources, and vulnerability to natural hazards. A direct consequence of these constraints is the delay in the national implementation of its international commitments.

The three states have a variable record in the designation of protected sites with an international status pursuant to their conventional obligations (Ramsar Secretariat 2007; UNESCO/WHC 2007). South Africa has 17 Ramsar sites (498,721 hectares) (including 6 in KwaZulu-Natal, which is the provincial neighbor of Mozambique) and 7 World Heritage sites (Ramsar Secretariat 2007). iSimangaliso Wetland Park is both a Ramsar and a World Heritage site. Tanzania has four Ramsar sites (4,868,424 hectares), one of which is the Rufiji-Mafia-Kilwa Marine Site. Tanzania has seven World Heritage Sites.[39] Although Mozambique has one World Heritage site and one Ramsar site, the area covered is a sizable 688,000 hectares.

Most importantly, all three states signed on to the 2004 CBD COP decision to achieve effective protection of 10% of marine ecoregions by 2012.[40] As noted at the outset of this article, Mozambique and Tanzania are reported to be making good progress toward reaching those targets (at least until recently up to 8.1% for Tanzania's and 4.0% for Mozambique's continental shelf areas) (Wells, Burgess, and Ngusaru 2007). South Africa's record is also significant, as mentioned at the beginning of this article. Clearly, the CBD commitment provides a strong incentive for all three states to establish more MPAs, including MPA networks and transboundary MPAs.

### *Settled Jurisdictional Boundaries*

Reference to the degree of jurisdictional certainty of each state is pertinent because each of the three states will have internal MPA responsibilities up to the limits of its maritime zones, and will need to coordinate the exercise of pertinent legislative and enforcement jurisdictions on its side of the border in cooperation with the neighboring state concerned. Arguably, settled boundaries are more likely to facilitate clarity, certainty, and predictability in the exercise of national jurisdiction and thereby avoid or minimize conflict with a neighboring state over varying interpretations of legitimacy of national action (Johnston 1988). By and large, the three states have claimed most of the maritime zone and jurisdictional entitlements permissible under UNCLOS;[41] namely, the territorial sea, contiguous zone, and 200-nautical-mile EEZ (MZ LM 1996; SA MZA 1994; TZ TSEEZA 1989). This is important for the purpose of determining the type and full extent of maritime legislative and enforcement jurisdiction that the three states may exercise with reference to MPAs. There are some differences, however, in their respective claims. Mozambique and South Africa claim all the above-ocean zones. At the time of writing, only South Africa had made a submission concerning the outer limits of the continental shelf beyond 200 nautical miles for consideration by the Commission on the Limits of the Continental Shelf established under

UNCLOS. Mozambique was expected to make a submission, but has not, while Tanzania does not appear to have taken steps with respect to its continental shelf. However, these submissions will not likely be material any time soon for MPA networks and transboundary MPAs in the EAME region, which are likely to be located well within the territorial sea and EEZ. Also, Mozambique and South Africa have incorporated most of the UNCLOS provisions concerning baseline delineation[42] (MZ LM 1996; SA MZA 1994). Tanzania has not fully incorporated the baseline provisions; in particular, in relation to the straight baseline and bay closing line methods (TZ TSEEZA 1989). Tanzania may not have fully maximized the internal waters it can claim, although this is unlikely to affect transboundary MPA management with Mozambique.

With their maritime boundary settled by agreement in 1988, there are no outstanding boundary issues between Mozambique and Tanzania.[43] The maritime boundary between Mozambique and South Africa has not been settled. Both states appear to observe the median line rule for undelimited territorial sea boundaries in UNCLOS,[44] which is the maritime zone and boundary segment of greatest relevance for the most likely transboundary MPA scenario between the two states. Whatever the provisional arrangement might be, there is no legal boundary and it is conceivable that issues may arise in the exercise of enforcement jurisdiction along the putative territorial sea boundary.

### *MPA Policy Objectives*

The ocean policy literature provides useful pointers for MPA policymaking. Miles defined policy as a "purposive course of action in response to some set of perceived problems" (Miles 1989, at 214). Writing on national ocean policy, Levy described policy at this level as "global in scope and intent, formulated at the highest decision-making level" (Levy 1993, p. 77). A national policy for MPAs similarly implies that it ought to be formulated at a high level of decision making, even though its scope will be narrower than that of national ocean policy. For the purposes of comparative assessment, it is necessary to consider the existence of policies, commitments, or both in support of the establishment of national MPAs. The seniority of a decision is a prima facie indicator of the degree of political commitment.[45] Analogously with ocean policy and guided by CBD principles, a national MPA policy should:

- Express the national political will on conservation aspirations including a willingness to cooperate with neighboring states;
- Identify marine conservation objectives at the ecosystem, species, and genetic levels, and the pursuit of these in situ and ex situ;
- Respond to or anticipate problems and issues arising from the establishment and implementation of MPAs;
- Provide direction and purpose for governmental efforts while rationalizing intergovernmental and multiagency efforts;
- Provide a basis for the allocation of financial and administrative resources; and
- Establish a framework for inclusive participation by stakeholders.

It does not appear that Mozambique, South Africa, and Tanzania have adopted standalone MPA policies. Rather, their policy frameworks for MPA making are embedded in larger policy documents such as environment (and biodiversity), fisheries, and coastal zone management. Each of the three states draws policy guidance from various instruments. The effect of some of these instruments is to legislate policy. It is arguable that, as long as there are clear directions for MPA making in the various instruments, there is not a need for an

MPA policy confined to one instrument. In their overall approaches, all three are influenced by contemporary thinking in terms of balancing conservation and socioeconomic objectives and, in particular, with due regard to poverty alleviation needs.

In South Africa, the leading instrument for MPA making has historically been the Marine Living Resources Act and, to a lesser extent, the National Parks Act. Today, the South Africa National Environmental Management: Protected Areas Act provides for a more coordinated approach to creating protected areas, including MPAs, and sets out the objectives and framework for the declaration and management of protected areas generally (SA NEMA/PAA 2003). The 2003 act sets out the objectives and framework for the declaration and management of protected areas generally. The act also places emphasis on cooperative governance and establishment of systems of protected areas, including representative networks, while providing for sustainable utilization and inclusive participation. This is particularly relevant for South Africa's efforts in establishing MPA networks with its neighbors. The act sets out precise and detailed reasons for the establishment of protected areas, including MPAs. Complementary to the act is the White Paper on Marine Fisheries Policy for South Africa, which provides a framework for resource management directions including equity issues in fisheries (SA WPFP 1997). The Marine Living Resources Act further sets out principles and policy objectives for fisheries based on ecosystem and biodiversity protection, equity, precaution, and a participatory approach to decision making (SA MLRA 1998).

Recently, South Africa adopted comprehensive framework legislation, which now serves as the larger context for MPA making. Prepared in 2008, the National Environmental Management: Integrated Coastal Management Act was assented to on 11 February 2009 (SA NEMA/ICMA 2008). The act comes on the heels of a prolonged consultative process that included a Green Paper (SA GPCP 1998), a White Paper on Coastal Policy (SA WPCP 2000), and a publicly circulated draft Integrated Coastal Management Bill (SA ICM Bill 2006). The definition of the coastal zone is one of the most comprehensive for such legislation in that it covers not only the land-sea interface area, but also the full extent of the EEZ and includes functions normally reserved for other environmental protection legislation such as release of effluents, incineration, and dumping of wastes. The coastal zone is looked at as management space for the protection of the marine environment, use regulation, and within which management intervention may be necessary. The act provides for coastal protection zones and coastal protected areas. The former enable ". . . the use of land that is adjacent to coastal public property or that plays a significant role in a coastal ecosystem . . .," a useful tool providing the management and conservation authority to support the terrestrial portion of protected areas that are both coastal and marine (SA NEMA/ICMA 2008, section 17). Coastal protected areas may be designated for management by a state organ and, in this respect, could potentially overlap with other legislation by virtue of which MPAs may be established in South Africa. The act appears to have anticipated the potential overlap by providing that, by notice in the Gazette, "the whole or any part of a protected area that is not coastal public property, will not form part of the coastal protection zone" after consultation with the management authority of the protected area (SA NEMA/ICMA 2008, section 22). The overlap will likely not be totally avoided where MPAs (and protected cultural heritage sites) established under other legislation also include coastal public property.

Tanzania's most significant document in support of MPA making is the National Environmental Policy, a framework instrument that has conservation and enhancement of natural and man-made heritage, including biological diversity and unique ecosystems, as one of the overall objectives (TZ NEP 1997). Policy-makers in Tanzania appear to be

particularly conscious of past problems of conflicting and uncoordinated policies. There is an expectation that biodiversity conservation be integrated into all relevant government initiatives. This thinking permeates the National Forest Policy, the National Land Policy, and the National Fisheries Sector Policy and Strategy Management (TZ NFP 1998; TZ NFSP 1997; TZ NLP 1995). In forestry, which is relevant to the conservation of mangroves as habitats for many coastal and marine species, the protection of unique ecosystems and biological diversity is pursued with regard to the needs of the local population. For MPAs with a coastal component, the land policy is relevant because one of the objectives is to protect sensitive areas. The fisheries policy is even more direct in promoting the protection of fragile ecosystems, vulnerable and endangered species and their habitats, and areas of special ecological significance. This policy promotes the establishment of marine parks, reserves, and closed breeding areas on the basis of collaborative management with user communities. According to the National Integrated Coastal Environment Management Strategy, the protection of areas of high biodiversity should be achieved inter alia through incorporation of these areas into existing MPAs and the creation of new MPAs "where local communities support the concept of a park" (TZ NICEMS 2003, at 25). This instrument proposes the implementation of Special Area Management Plans in transboundary areas where "significant coastal management issues exist" (TZ NICEMS 2003, at 26), enabling the central government, together with local authorities and stakeholders, to plan and manage coastal areas of special importance. In general in Tanzania, conservation policy and practice appear to support the establishment of transboundary MPAs, as is further evidenced by the National Fisheries Sector Policy, the Fisheries Act, and the Marine Parks and Reserves Unit Strategic Plan for 2005/2009 (TZ FA 2003; TZ MPRU 2005; TZ NFSP 1997).

Mozambique has a range of policies that support biological diversity conservation and MPAs. In particular, the 1995 Environmental Policy addresses, among other issues, coastal zone management and the creation of marine parks as a tool for the development of marine and coastal resources (MZ EP 1995). The Strategy and Action Plan for Biodiversity Conservation in Mozambique was produced by a unit within the Ministry for the Coordination of Environmental Affairs (MICOA) and is the country's plan to implement and meet the targets of the Convention on Biological Diversity (MZ SAPBC 2003), including marine resources and in situ conservation. The National Tourism Policy and Implementation Strategy promotes protected areas by blending development and conservation objectives, and facilitating private investments and benefits for local communities (MZ TPIS 2003). This policy, as well as the national Fisheries Policy and Strategy for its Implementation, targets distribution of benefits and poverty alleviation (MZ FPSI 1996; MZ TPIS 2003). The National Land Policy similarly provides for protection zones, but also guarantees land use access by the people (a major issue) and protects customary rights of access to rural communities (MZ NLP 1995). In Mozambique, land is vested in the state and, accordingly, government has a fundamental responsibility for its conservation and for providing access to its benefits for the people (MZ Constitution 2004). Several other sectoral policies include environmental concerns in their goals.

### *Existence of a National and Subnational Legal Framework for MPA Making*

In examining governance indicators for the purpose of evaluating MPAs, Pomeroy, Parks, and Watson (2004) advised that consideration of the

> existence and adequacy of legislation to enable the MPA to accomplish its goals and objectives is a measure of formal legislation in place to provide the

> MPA with a sound legal foundation so that the goals and objectives of the MPA can be recognised, explained, respected, accomplished and enforced. In some areas, traditional law may also serve as a foundation for the MPA. (at 175)

Accordingly, the existence and degree of MPA-related legal development–whether formal (i.e., legislation) or informal (i.e., customary; Pomeroy, Parks, and Watson's "traditional")–is essential for a comparative assessment. MPAs may be established under dedicated legislation (i.e., statutes and rules specifically developed for MPA purposes), but other sectoral legislation may be important to further MPA objectives (e.g., the establishment of no-take zones in fisheries legislation or areas to be avoided in navigation under shipping legislation).

Pomeroy, Parks, and Watson (2004) justified "enabling legislation" (as an evaluation indicator) as being necessary for successful implementation of the MPA management plan (at 175). Further, and perhaps even more fundamentally, a proper national and subnational legal basis provides legitimacy for MPA making and the consequent measures that may have to be taken such as restrictions on or closure of access to resources. In addition to examining the recognition of MPAs in the national legal system, a comparative assessment also needs to consider the extent to which there is legal basis to support the "network" approach to MPA making in national law as a systematic approach to protected areas based on representativeness of natural systems in the state, in relation to neighboring states, and, ideally, also in the region (Kelleher 1999). Citing Christie and White, Sanders and Cochrane (2006) noted that networks should also function to accomplish social as well as ecological goals. This is important in East Africa because MPAs have the potential of contributing to poverty alleviation, a major regional concern.[46] Ascertaining the extent to which national law promotes social as well as conservation objectives is relevant.

Mozambique, South Africa, and Tanzania have highly developed legislative frameworks to support the designation, implementation, and management of national MPAs. There are few legislative and policy provisions that direct efforts at regional MPA networks or transboundary MPAs. However, the well-developed national legal frameworks appear to support national MPA commitments that may be undertaken in coordination with similar MPA initiatives of neighboring states. All three states have modern legislation, mostly post-1992. Also, all three states have local customary law that may play a role in MPA making and management.

The constitutions of the three states address environmental protection. In Mozambique, the national government and local authorities are required to legislate for environmental protection and rational utilization of resources, in cooperation with other environmental associations (MZ Constitution 2004, Article 90). Clearly, the national government has conservation duties (MZ Constitution 2004, Article 102). South Africa's constitution provides a citizens' and intergenerational right to an environment not harmful to human health (SA Constitution 1996, section 24) and conservation and sustainable development, including ecological integrity, are also addressed. There is a right of access to natural resources rather than a right to the resources themselves (SA Constitution 1996). Tanzania places a duty on every citizen to protect the country's natural resources (TZ Constitution 1977). The Tanzanian constitution is sensitive to the need to consider natural resource development with reference to human development, especially the eradication of poverty. As seen elsewhere in this article, the latter is also a salient policy concern in Mozambique and South Africa.

Protected areas in South Africa can be designated under several statutes depending on the particular purpose of the designation. There are roles to be played by national and provincial governments. Jurisdiction over marine areas is a national government

responsibility but, in some cases, the provinces are allocated roles in the implementation of nationally designated protected areas. As noted earlier, the lead legislation is the National Environmental Management: Protected Areas Act, which replaced prior legislation on protection and conservation of South Africa's biodiversity, landscapes, seascapes, and environmental goods and services (SA NEMA/PAA 2003). The act adopted a common international practice of generally following the six categories of MPAs set out by the International Union for the Conservation of Nature (IUCN) (Kelleher 1999). Closely related is the Biodiversity Act, which empowers the minister to enter into agreements with neighboring states to secure the effective implementation of a bioregional plan containing measures for effective management and monitoring of biodiversity (SA NEMA/BA 2004, sections 40–41). Other statutes also empower the minister to declare MPAs. In a fisheries context, the Marine Living Resources Act empowers the minister with this prerogative (SA MLRA 1998, section 43). The Environment Conservation Act empowers the minister to declare Special Nature Reserves, including in the territorial waters of South Africa, to protect the environment or special characteristics and features (SA ECA 1989, section 18). The National Parks Act permits the establishment and management of national parks (SA NPA 1976). The World Heritage Convention Act is the basis for the designation of World Heritage sites (SA WHCA 1999). The Integrated Coastal Management Act is state-of-the-art legislation that has reorganized marine environmental protection and conservation with a unique integrated approach that includes provision for coastal protected areas, coastal wetlands, specially protected areas, and special management areas. The definition of *coastal waters* includes "marine waters that form part of the territorial waters or the internal waters" and estuaries, and the "coastal zone" includes the EEZ (SA NEMA/ICMA 2008, section 1).

The significant number of instruments providing a ministerial power to designate a protected area may, at first blush, suggest unnecessary complexity and inefficiency. However, only one national government department has, until recently, dealt with MPAs: the Department of Environmental Affairs and Tourism (DEAT). New government structures introduced after the 2009 elections have seen DEAT split into three ministries: Agriculture, Forestry and Fisheries; Water and Environmental Affairs; and Tourism. Each is likely to have a stake in MPA development, but the exact details and implications remain to be finalized and clarified.

There may be an issue respecting hierarchy of legislation for a specific MPA; for example, in terms of what statute takes priority over the same area should there be conflict between legislative provisions. This could have a bearing on management and reporting. The Integrated Coastal Management Act attempts to address this concern and provides that the act prevails over other legislation in relation to coastal zone management concerns (SA NEMA/ICMA 2008, section 6).

In Tanzania, the Environment Management Act lays out a broad legal framework for the enhancement, protection, conservation, and management of the environment with a strong emphasis on integration and sustainability (TZ EMA 2004). The statute most directly related to the establishment of MPAs is the Marine Parks and Reserves Act, which was specifically adopted to provide for the establishment, management, and monitoring of marine parks and reserves with the purpose of conserving, protecting, and restoring species, habitats, and ecosystemic processes (TZ MPRA 1994).[47] Mafia Island Marine Park and Mnazi Bay Ruvuma Estuary Marine Park were established as marine parks under this statute. MPAs in Tanzania can also be established under other statutes that serve a more general purpose. For example, the Saadani National Park was established under the National Parks Ordinance, although this statute does not specifically provide for MPAs

per se (TZ NPO 1959). The Dar es Salaam and the Maziwe Island Marine Reserves were both declared under the Fisheries Act (TZ FA 1970). According to the Marine Parks and Reserve Act, the minister responsible for national parks may, after consultation with the relevant local government authorities, declare any marine park or any part of a marine park to be a national park. Under the Fisheries Act, the minister may take protective measures, but not all fisheries legislation appears to support MPA making. Previously, the Deep Sea Fishing Authority Act provided no conservation mandate or provision for the establishment of MPAs in the EEZ (TZ DSFA 1998), but this changed with amendments to the act in 2007. According to the amended Deep Sea Fishing Authority Act, the Deep Sea Fishing Authority has additional functions to safeguard the EEZ environment and to implement any agreement reached at regional and other international levels to which Tanzania is a party (TZ DSFA 2007). Finally, under the more general Environmental Management Act, the minister may, on the recommendation of the National Environmental Advisory Committee, declare as an Environment Protected Area an area of land considered ecologically fragile or sensitive for various reasons, including international commitments, ecological and landscape values, local community interests, and so on (TZ EMA 2004).

As in the cases of South Africa and Tanzania, the general environmental law of Mozambique incorporates modern international environmental law principles (e.g., precaution, traditional knowledge, ecosystem protection, inclusive participation, gender equity, polluter pays, environment impact assessment (EIA)), providing an important overarching principled framework for environmental management and conservation efforts. The Environment Law provides for environmental protection zones over terrestrial and marine areas in order to facilitate protection of ecosystems that have ecological, socioeconomic, aesthetic, cultural, scientific, and other values (MZ EL 1997). Similar provision for protection zones exists in the Land Law and the Forestry and Wildlife Law (MZ FWL 1999; MZ LL 1997). The latter provides for the establishment of various types of conservation and protected areas. Other statutes provide for the taking of management and conservation measures. The Fisheries Law provides for the adoption of conservation and management measures, including: minimal size or weight of species, closed seasons, limited or no-access areas, minimum mesh size, permissible fishing gear methods, catch quotas per boat or person, schemes for limiting access or effort, and fish sanctuaries (MZ FL 1995, Article 35a). The Tourism Law plays a role in the conservation of terrestrial and marine biodiversity (MZ TL 2004) and the Local Organs Law enables district authorities to propose protected areas, designate ecological zones and other protected areas, and establish reserves using their land use planning powers (MZ LOL 2003). Mozambique is considered to have a good system of representative protected areas, accounting for some 12.6% of the land surface of the country and 4% of the continental shelf (Wells, Burgess, and Ngusaru 2007). With the designation of Inhaca Island as a protected area in 1965, it also has one of the oldest MPAs in the region.[48]

### *Regulatory Tools for Land Use Planning, Marine Spatial Planning, and Resource Use*

Legal recognition may be sufficient for designating and establishing MPAs but, for management purposes, an MPA manager will be concerned with human and ecological uses of the area concerned. Thus an MPA manager, as a type of marine manager, needs to be equipped with or have access to a range of tools appropriate for the regulation of marine resource and nonresource uses. Where an MPA includes a terrestrial component, the marine manager may also perform coastal management functions. Tools for MPA

managers may be specifically provided in MPA-dedicated legislation or in other existing legal instruments. For example, regulatory tools for fishery management purposes may include zoning, licensing, permissible fishing gear, habitat protection, closed seasons, no take zones, and so forth, which may be useful for MPAs that include fishing interests. Shipping legislation frequently includes regulatory powers consisting of standard-based safety and environmental regulation, including vessel waste discharges into the marine environment and routing schemes that include navigation routes, traffic lanes and separation schemes, areas to be avoided, mandatory and voluntary reporting, and so forth. Environmental and wildlife legislation may address discharges and dumping in the marine environment, species-specific protection, habitat protection, EIA, and so forth. Similarly, in land use law, zoning and related planning tools can be useful for the MPA manager. More recently, in some jurisdictions, marine spatial planning is being promoted as an essential ocean management tool complementary to integrated coastal zone management (European Union 2008).

Mozambique, South Africa, and Tanzania's suite of environmental and sectoral statutes provide a wide range of tools to support conservation and the regulation of resource and nonresource uses within MPAs. In Tanzania, any area declared as an Environment Protected Area under the Environmental Management Act can be managed by the tools provided under the act. These tools include zoning, access restrictions, fees, and so forth, and a broad power for "any other measure deemed appropriate for proper and sound use of the area" (TZ EMA 2004). The limitation is that the legislation applies to terrestrial, inland waters and shoreline areas, but not to marine areas which are covered under other legislation. These powers are, however, valuable for the coastal and estuarine parts of an MPA. The Marine Parks and Reserves Act requires general management plans for a park or reserve and provides an EIA requirement for certain activities within a park. Parks and reserves are generally considered no-take zones (TZ MPRA 1994). Guided by the National Forest Policy, the Forests Act also provides for EIAs as a management tool and for the establishment of forest reserves and buffer zones around them (TZ FA 2002; TZ NFP 1998). The Fisheries Act has various resource access, management, surveillance, and enforcement tools. The minister has a regulatory mandate for the protection of critical habitats, closed periods, and conservation (biodiversity, habitat, and endangered species) (TZ FA 2003).

South Africa's statutory management tools are similar to Tanzania's. The Marine Living Resources Act empowers the minister to declare protected areas, and this provision has been used to renew protected area status for South Africa's marine parks (SA MLRA 1998, section 43). Further, the Minister of Fisheries may declare certain areas to be under special management control as fisheries management areas. Similarly, the Environment Conservation Act enables the designation of Limited Development Areas within which strict control is imposed on certain developments (SA ECA 1989, section 23). EIAs are also an important tool that can be used for MPA purposes under the National Environmental Management Act, and this includes public participation (SA NEMA 1998).

Mozambique law similarly provides for a wide range of regulatory authority to adopt management and conservation measures, including EIA and environmental audits (MZ EAR 2003; MZ EIAR 2004), fishery management zoning, species-specific protection (e.g., turtles), licensing and effort control (MZ REPMAR 2003), environmental quality standards (MZ RSEQ 2004), marine pollution prevention (MZ PPO 1973), strategic environmental assessment,[49] and so forth. Regulations tend to provide more detailed powers for the establishment of marine parks, reserves, and other protected areas (e.g., MZ REPMAR 2003).

***Institutional Mandates***

A corollary to the requirement for a solid legal foundation for MPAs is the need for an institutional framework, which includes a clear allocation of a legal mandate for MPA purposes. This mandate needs to set out the lead role to be played by an identified institution, its functions and powers, and its relationship to other interested institutions. The lead institution will normally be expected to perform its functions in cooperation with other national agencies, other levels of government and local authorities, and interest groups, including communities and stakeholders. Vertical (intergovernmental in a domestic setting) and horizontal (interagency) coordination, especially where institutional mandates overlap, is important to enable effective MPA management. The reality of sectoralization of government functions requires the lead institution to collaborate with other government agencies. This may be a requirement set out in parent legislation (Vallejo 1992). Mozambique, South Africa, and Tanzania have significantly different institutional frameworks for MPA making. Each of the three states has multiple institutions at various levels of decision making, and the degree of vertical and horizontal coordination among the multiple institutions involved is variable.

Environmental policy in South Africa is set at the national level, with provinces carrying considerable responsibilities for its implementation; especially, in the coastal and marine environment. Responsibility for the administration and coordination of the national policy and legal framework concerning MPAs has been the responsibility of the DEAT, with provincial departments of environment having a role in implementation. Changes introduced after the 2009 reshuffle[50] are likely to split the responsibility for MPAs between fisheries and environment ministries. The past centralization of this responsibility in the DEAT allowed for a common strategic approach, even when MPAs were proposed by different agencies under different instruments. It also meant that contributions to national, regional, and international responsibilities could be better evaluated and the meeting of MPA targets by 2012 better coordinated. It remains to be seen if the new government structures will retain this efficient "one-stop-shopping" approach.

In Mozambique, although the lead agency is MICOA, there are overlapping mandates among ministries. MICOA is the national government's lead agency for developing and implementing environmental policy, and for the coordination for the proper planning and utilization of natural resources (MZ MICOA 1995, Article 1). There are at least three national government institutions with responsibilities for the establishment and management of wildlife resources, including the Ministry of Agriculture (overall responsibility for wildlife management in free areas and reserves), the Ministry of Tourism (national parks and reserves including "Transfrontier Conservation Areas" and hunting areas), and the Ministry of Fisheries (in regulating fishing). Related functions are also performed by the MICOA and the Ministry of Education and Culture (social-cultural heritage matters).

Under Tanzania's Marine Parks and Reserves Act, the Marine Parks and Reserves Unit (MPRU) is responsible for management of those protected areas. Under the National Parks Act, the Tanzania National Park Authority advises the minister on the establishment of reserves and parks, including marine parks. The president proceeds with designation only after a resolution is submitted by the minister to parliament and is passed. However, there appears to be confusion on the structure, functions, and responsibilities of the MPRU, including its relationship to the director of fisheries. Difficulties are experienced by the MPRU, as a centralized institution, in the establishment and management of MPAs. Further, there are as many as 10 ministries that have mandates touching on coastal and marine resource and environmental issues. Of particular interest in Tanzania's institutional

framework for MPAs is the role of lower levels of government. Local management by communities is more viable if those communities are persuaded of the value and benefits to be reaped from taking on this responsibility. Under the Town and Country Planning Ordinance, local authorities are empowered to declare and regulate planning areas (TZ TCPO 1956). There is a potentially important role for local urban government authorities in the taking of measures or making bylaws in support MPAs under the Local Government (Urban Authorities) Act (TZ LGUAA 1982). For example, measures for the conservation of natural resources may be taken at this level of government (e.g., prevention of soil erosion, food inspection). Local government authorities are empowered with fisheries licensing and enforcement and are normally involved in the management of marine parks and reserves in an advisory capacity under the Local Government (District) Authorities Act (TZ LGDAA 1982). Under the Village Land Act, villages have land management responsibilities that require them to consult and be consulted (TZ VLA 1999).

### *Process for MPA Decision Making as Established in Law*

Attention needs to be given to the designation, establishment, implementation, and ongoing management of MPAs. Differences can be expected as to how decision making is set out in relevant national legislation, whether decisions are *dirigiste*, that is top down by the mandated government institution, or bottom up (community or stakeholder driven), or somewhere in between such as in comanagement (shared between the government or community and stakeholders), or perhaps even a mixture of the above depending on the situation (Hildebrand 1997). The degree of similarity or differences in legal processes (and cultures) of decision making between Tanzania and Mozambique, and Mozambique and South Africa will be important to understand as these will be relevant considerations for cooperative MPA networks and transboundary MPAs.

Mozambique, South Africa, and Tanzania have different procedures for MPA establishment. In South Africa, the procedure depends on the statute used to designate a protected area but, as noted earlier, the decision for establishing an MPA has to date remained the responsibility of DEAT. The MPA designation process in South Africa (see Figure 2) may be initiated by any person or the government itself. The process tends to invite stakeholder, public, and governmental comment, after which a proposal is revised and submitted to the minister for approval. The MPA is then declared and published in the government Gazette. National parks and World Heritage sites need parliamentary approval before proclamation and, likewise, the termination of park status requires parliamentary assent. An integrated management plan is not necessarily adopted at the outset, but would normally be completed within 6 months of the designation of an MPA under the National Environment Management Protected Areas Act (SA NEMA/PAA 2003, section 39(2)). This is a responsibility that the minister delegates to a provincial or park authority and is undertaken with public participation. However, MPAs declared solely under the Marine Living Resources

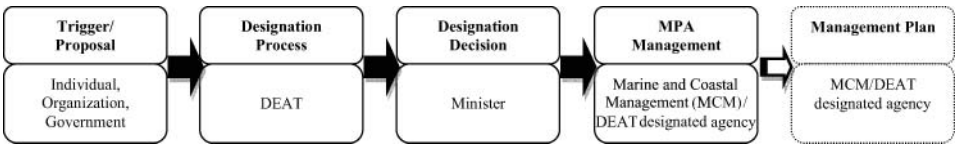



**Figure 2.** MPA designation process in South Africa. Abbreviations: DEAT, Department of Environmental Affairs and Tourism; MPA, marine protected area.

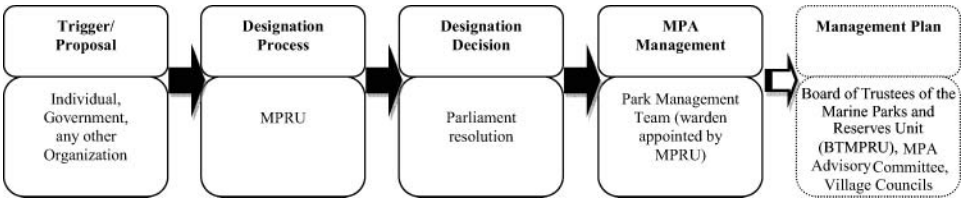



**Figure 3.** MPA designation process in Tanzania. Abbreviations: MPRU, Marine Parks and Reserves Unit; MPA, marine protected area.

Act have no obligation to produce such management plans. There have been problems of transparency and decision making in some MPAs.

In Tanzania, marine parks and reserves are similarly established by the minister after consulting local authorities. A local authority or other nongovernmental institution or person may also advise the minister to establish an MPA (see Figure 3). The governmental legwork is undertaken by the MPRU. The Board of Trustees of the MPRU appoints the warden for an MPA and, in turn, the warden may appoint park officers in consultation with the board. Once established, an MPA plan will be developed by the board, the advisory committee of the MPA, and village councils. As in the case of South Africa, this is to occur within 6 months of declaration of an MPA. The minister has to approve the plan (TZ MPRA 1994, section 14); however, the actual management is the responsibility of the park management team.

In Mozambique, the establishment of protected areas follows different processes (see Figure 4), top down or bottom up, depending on the institution from which a proposal arises. At the provincial or local level, a proposal arising from the decentralized ministry services (either as the proponent or on behalf of an individual or entity from which the proposal was originally created) is subject to the approval of the Council of Ministers, after being channeled by the central services. If the proposal was initiated by the local government, the relevant ministries will contribute to the process, after which the proposal is sent to the Council of Ministers, following scrutiny from the Inter-institutional Technical Committee for Coastal Management and by the National Council for Sustainable Development. In both of these processes, community consultation is mandatory only at the establishment phase and as a contribution to the management plan. Yet another process for the establishment of protected areas commences with communities and other relevant stakeholders, and its results as well as other technically relevant documentation (including the management plan) are subjected to the approval of the relevant entities.

The major difference between the top-down and the bottom-up approaches is that the former is based on the potential of an area to be proclaimed and the latter relies on technical

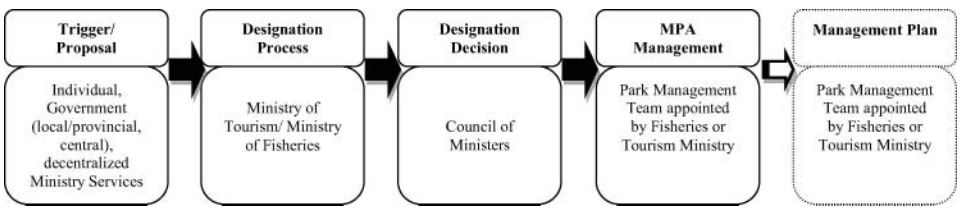



**Figure 4.** MPA designation process in Mozambique. Abbreviation: MPA, marine protected area.

information with supporting evidence that there are biophysical and social conditions to establish a conservation area. In the particular case of MPAs, only the Ministry of Fisheries and the Ministry of Tourism can initiate a proclamation process.

### *Participatory Rights and Processes*

This criterion is closely related to the previous one. Whereas the previous criterion considered decision making from the perspective of the mandated institution, participatory rights and processes relate to the expectations of communities and stakeholders to be included in decision making processes. This expectation can be legal (in terms of a legislated or customary right, i.e., enforceable), as much as political, social, and ethical. Pomeroy, Parks, and Watson (2004) wrote that

> the level of stakeholder participation in the management of the MPA is a measure of the amount of active involvement of people in making MPA management decisions or involvement in management activities and of their satisfaction with their level of participation, including if their views and concerns are being heard and considered by MPA managers. (at 193)

The significance of this, Pomeroy, Parks, and Watson (2004) continued, is that if there is inclusive participation of stakeholders, they are more likely to develop a sense of ownership and more likely to be compliant with management measures (at 193). Others have similarly noted that top-down approaches to decision making have frequently led to failure in fisheries management and MPAs (Christie and White 2006; Cochrane 2007; Salm, Clark, and Siirla 2000; Sanders and Cochrane 2006; World Resources Institute 2004). Accordingly, for the purposes of the comparative assessment, it is useful to determine how the policy and legal framework in each of the three states provides for inclusive participation. In particular, community and stakeholder compliance on either side of the borders between Mozambique and Tanzania and Mozambique and South Africa (KwaZulu-Natal Province) can be expected to be critical for the success of prospective transboundary MPAs in the border regions.

Consistent with modern governance practices, the legislation of Mozambique, South Africa, and Tanzania provides for public participatory rights and processes in developmental and environmental decision making. As part of the general process of democratization in post-apartheid South Africa, there has been a consistent trend toward promotion of inclusive participation in policy development in support of environmental legislation. Legal standing to enforce environmental law through public and private prosecution, including public interest actions, is provided in the National Environmental Management Act (SA NEMA 1998, sections 32–33). In particular, the act provides that any person can seek appropriate relief with respect to any breach or threatened breach of any of the principles of the act (SA NEMA 1999, section 2). Consultative processes are also built into conservation decision making.

This is also the case in Tanzania. Tanzania's Fisheries Act provides for Beach Management Units, a type of comanagement mechanism, to enable local community stakeholders to cooperate with the government in the management, conservation, and protection of local fishery resources (TZ FA 2003). Also, under Tanzania's Marine Parks and Reserves Act, the park warden has a duty to involve affected villages in the establishment, governance, and management of the park or reserve, and village representatives have a right to advise officials on management and conservation matters and, thereby, also benefit from the park (TZ MPRA 1994). Village representatives are part of an MPA's advisory committee and,

together with this committee, they are responsible for proposing a general management plan for an MPA to the respective board. Public participation in environmental decision making is also fostered by the Environmental Management Act (TZ EMA 2004).

Similarly in Mozambique, various policies and legal instruments promote public participation, especially, local communities, on issues of development and conservation of biological diversity (e.g., MZ SAPBC 2003). Environmental legislation requires community participation and the utilization of their knowledge (MZ EL 1997, Article 30). The law requires decentralized implementation to enable local participation, initiative, and benefit (MZ EL 1997, Article 7). Decentralization envisages participative administration and management, including public-private partnerships. In the establishment of conservation areas, the "timing" of the consultation process depends on how the proclamation is initiated: if top down, consultation takes place during the elaboration of the management plan; if bottom up, consultation is part of the proposal presented to the authorities.

There is an uneven practice in the public dissemination of information, especially, of the regulatory type, and access to public information. In South Africa, on the one hand, public access to information is elevated to the status of a basic principle in the National Environmental Management Act (SA NEMA 1998, section 2). On the other hand, communications from an MPA itself are generally weak and there is little public access to that information. In Mozambique, there appears to be a lack of awareness at all levels of society about environmental legislation with respect to the coastal zone. With lack of freedom of information legislation, poor communication infrastructures, and high illiteracy rates, especially, in rural areas, public access to information is an issue in Mozambique. Since 2000, Mozambique has had an Information and Communication Technology Policy (ICT) that aims at enhancing the infrastructure to enable provision of a wide range of information important for national development, including natural resources management (MZ ICT Policy 2000). In comparison, in Tanzania, the dissemination of knowledge on parks and reserves is an important legislated objective (TZ MPRA 1994). It is conceivable that effective participatory processes could be hampered if there is insufficient dissemination of knowledge to enable informed participation by communities and other stakeholders and this, in turn, could hamper buy-in into existing and future MPAs. There has been criticism in Tanzania that there are legal and institutional barriers to effective access to information by the public. For example, "there is no single government source of environmental and natural resource information for the public. With no central repository for environmental information, the public must make requests to multiple sources to get all relevant information" (LEAT 1999, p. 8).

### *Enforcement and Incentives for Compliance*

Ideally, an MPA should create an atmosphere of stakeholder compliance as a consequence of management efficiency and effectiveness, without the need to divert resources into compelling behavioral outcomes. In addition to the likely benefits of inclusive participation, the policy and legal framework may anticipate the provision of benefits for compliance such as fiscal, economic, or social and cultural benefits for stakeholders. But the reality is that compliance cannot always be relied on and enforcement of the law may be necessary. Enforcement gives fiat to the legal protection of MPAs and avoids the risk of having paper MPAs. It is necessary that there be proper authorization of MPA managers and related officials to undertake enforcement (Pomeroy, Parks, and Watson 2004, at 198). A comparative assessment would need to ascertain the experience in each of the three countries with respect to the enforcement of legal and management measures for MPA violations.

Having determined the existence of an MPA policy and legal framework, knowledge of its existence and functions among communities and stakeholders is an important indicator of MPA success (Pomeroy, Parks, and Watson 2004, at 202). A comparative assessment would need to consider whether mechanisms for the dissemination of this information are in existence in the three states. Knowledge is an indispensable element to facilitate inclusive participation in decision making, understanding of the reasons for management measures, and compliance with those measures.

As noted above in relation to South Africa, the provinces are largely delegated responsibilities for implementation and compliance (SA MLRA 1998, Chapter 6). For example, the Ezemvelo KwaZulu-Natal Wildlife is the conservation manager of the iSimangaliso Wetland Park and performs the enforcement functions. There is a high level of voluntary compliance in MPAs off KwaZulu-Natal, possibly due to public buy-in as a result of participatory processes in MPA making, but also because of effective zoning that enables many users to operate under tight controls (with outright prohibition limited to sanctuary areas). This is particularly relevant for the transboundary area between Mozambique and South Africa. Where compliance issues arise, they tend to be more in relation to land ownership and terrestrial resources than to MPAs where the waters are subject to surveillance. Compliance is more of an issue elsewhere where there are higher subsistence needs or valuable resources (e.g., abalone), and where fish poaching is common. More of a problem along much of the East African coast is compliance by international shipping with basic MARPOL discharge requirements in the proximity of MPAs, but this is a problem common with many marine regions around the world.

In Tanzania, there may be an issue of meeting the statutory time requirements to put in place regulations and management plans and, thereby, facilitate compliance. Ministerial delay in enacting regulations implementing primary legislation, among others, was responsible for the late establishment of the general management plans for Mnazi Bay and Mafia Island parks. However, there are practical matters to consider. For example, the development of a General Management Plan (GMP) involves a long and intensive consultative and approval process; particularly, in relation to the identification of zones, their demarcation, and the process for securing approval of the plan. The document first has to be approved by all villages in the park, then by district authorities, followed by the Park Board and finally the minister. The process requires a considerably longer period than the 6-month period stipulated in the legislation.

In Mozambique, responsibility for enforcement within a conservation area lies with park staff and ultimately its manager. Because existing protected areas are all under the Ministry of Tourism, the park manager is expected to liaise with the local decentralized services of that ministry. However, it does not appear that local tourism services participate in law enforcement activities within conservation areas. Protected areas in Mozambique often lack sufficient staff and other resources to make enforcement effective. Compliance with the management plan is often dependent on the views and feelings of local communities on the conservation area and the impact regulations have on their daily life and subsistence. It is not unusual for conflicts to arise. For example, in the context of terrestrial protected areas, conflicts between elephant movements and human settlements often occur, including in the Maputo Elephant Reserve near Ponta de Ouro on the south coast of Mozambique.

### *Conflict Management Processes*

Although the MPA-making process should be guided by conflict avoidance, it can be expected that the designation and implementation of an MPA may juxtapose divergent or

irreconcilable interests, possibly leading to conflict. Conflicts may arise in several situations such as interagency within the government, between levels of government (e.g., national government and local authority), between government (whether national or subnational) and a community or group of stakeholders, between communities, within communities, between communities and other stakeholders, and between the respective cooperating governments themselves. Competitive behavior may concern resource access (allocation), multiple uses of the same space ("elbowing"), adverse impact of one use on others (e.g., pollution), actor (intra- and interuse) conflicts, actor-regulator conflicts, and process-related differences (participation) (Chircop 1994). The determination of mechanisms and processes for conflict management and the similarities or differences between the three states is necessary in a comparative assessment. There is a wide range of formal and informal conflict avoidance and management processes that may be adopted in whole or in part, including fact finding, negotiation, mediation, and conciliation, among others (Harness 1996; Wall and Lynn 1993).

In South Africa, the National Environmental Management Act provides structures for conciliation, arbitration, investigation, and compensation for environmental conflicts, which presumably would include MPA-related conflicts (SA NEMA 1998, Part IV). Indeed, the "Director-General shall designate an officer to provide information to the public on appropriate dispute resolution mechanisms for referral of disputes and complaints" (SA NEMA 1998, section 22). The picture is different in Mozambique's and Tanzania's legislation, where the process for managing conflicts concerning MPAs is unclear. The designation and implementation of protected areas in Mozambique has not been without difficulty. For instance, although human settlements are not permitted in conservation areas given full protection (e.g., national parks and reserves), in reality there are many communities that had been living in the protected areas before these were created (MZ FWL 1999; MZ LL 1997). This situation has generated significant conflicts between the human settlements and wildlife, and the degradation or destruction of habitat and animals. It has also led to conflicts with park authorities. For example, in the Maputo Elephant's Reserve, one or two communities take the view that they do not belong to the reserve and, thus, dispute the authority of park managers. Tanzania has also experienced conflicts between sectoral administrative responsibilities, including in terms of licensing for resource use, monitoring, control, and surveillance.

### *MPA Review*

Several authors in the ICOM and MPA fields have highlighted the importance of ongoing and periodic review, not only of management operations and their effectiveness, but also of the framework (including legal) for management (Chircop and Hildebrand, 2006; Cicin-Sain and Knecht 1998; Pomeroy, Parks, and Watson 2004). In essence, an MPA governance framework review is advocated as a systemic requirement in the interests of quality assurance and continued relevance. Regular monitoring and periodic review are essential to enable measurement of progress toward conservation targets and outcomes. Inclusion of review in the governance framework enables an assessment of its efficiency in helping achieve targets. Governance reviews can also be useful to ensure that equity issues (e.g., inclusive participation) are not overlooked. The assessment should consider whether review requirements are legislated in each of the three states to enable the taking stock of MPA making and cooperation on marine conservation matters on a periodic basis.

Insofar as the effectiveness of MPAs is concerned, all three states tend to monitor some aspects of the MPAs as a matter of practice. South Africa's legislation demands evaluation

of MPA effectiveness against a set of performance indicators specific to each MPA but, in most cases, this is either not achieved or the indicators are inadequate to properly evaluate effectiveness. In most cases, the monitoring relates more to tourist visits and transgressions than to biodiversity issues. In the case of Mozambique, an MPA law review process would likely encounter issues of lack of capacity and the fact that MPA-related legislation is not limited to a single instrument. Therefore, any review would have to deal with many other issues that the various laws address and their original raison d'être. Insofar as park-specific reviews are concerned, the Limpopo National Park, as part of the wider Great Limpopo Transfrontier Park, is subject to review. MPA management plans have to be reviewed every 5 years. Bazaruto National Park was reviewed and the park's boundaries were extended to cover other sea areas and islands not included within the original boundaries. Similarly, the Maputo Elephant Reserve's boundary was extended to include 3 to 5 nautical miles of ocean space. In Tanzania, although the Marine Parks and Reserves Act does not provide for periodic review, the GMPs do have provisions in them for conducting review park-specific reviews.

## Assessment

This article set out with the objective of identifying and comparing the national governance frameworks for MPAs between Mozambique, South Africa, and Tanzania, and to identify issues that could facilitate or constrain MPA cooperation between them. In particular, this article has attempted to assess the degree of similarity between those national governance frameworks and identify gaps that could constrain bilateral or multilateral MPA network and transboundary MPA cooperation.

In responding to these tasks, a noticeable aspect of the environmental policy and legal infrastructure of the three countries is the recent vintage of several of the main instruments. These laws tend to be novel, modern, mostly post-Rio, and, thus, imbued with the sustainable development ethic, but possibly also insufficiently "weathered" as they may have yet to generate experience, review, and adaptive amendment. In Mozambique's and South Africa's cases, the new legislation followed the end of traumatic periods. In Mozambique's case, there has been a period of societal, legislative, and infrastructural reconstruction in the wake of the devastations of the civil war in the 1980s and until 1992. The war took a heavy toll not only on human life and socioeconomic well-being, but also on the environment and many individual species. South Africa has experienced a rethinking of basic governance structures, including environmental, since the end of apartheid and launching of democracy in 1994, but has not suffered the environmental losses of Mozambique.

Despite their modernity, the policy and legal frameworks for MPA making in Mozambique, South Africa, and Tanzania are products of established conservation experience in and outside of the three states and are certainly not paper phenomena. The three states have adopted principled approaches in their main conservation policies and legislation. All have established and managed different types of terrestrial protected areas and MPAs for many years. Admittedly, the capacity and effectiveness have been variable and these can be explained in several ways. But, there are sound practices in place such as the involvement of different levels of government, use of diverse regulatory tools, and promotion of participatory rights and processes. There are diverse, but comparable, decision-making processes for MPA designation. Each state has different processes for MPA designation that include multiple ways on how protected areas may be established.

Despite the obvious strengths of the governance frameworks of the three states, not everything is rosy. There are significant gaps in adherence to pertinent international

environmental law conventions that would support neighborly marine environmental and MPA cooperation. The institutional framework for MPAs suffers from inefficiencies. Delineation between institutional mandates is an issue in Mozambique and Tanzania where parallel mandates for MPA making are in place, contributing to overlaps and ambiguity of management roles and responsibilities. The legal definition of MPAs is also an issue in Tanzania where there is a need to more clearly define the legal and management parameters of the different MPAs permitted, notably the distinction between parks and reserves and better cross-sectoral regulation in support of MPAs. The problem may be explained, in part, by the absence of legislated duties for government agencies to coordinate the performance of their functions.

Lack of capacity is yet another issue. Mozambique has a far-reaching need for capacity building on several fronts, including better access and exchange of information on international conventions; the capacity of government to employ true integrated approaches and better interinstitutional coordination; further strengthening of environmental law (in particular, to support MPA management and enforcement); and simplification of legal documentation for public information and dissemination among communities, taking into consideration illiteracy and poverty constraints. Conflicts between legal institutions can be a problem. The experience of Tanzania also shows that customary rights are not always recognized in legislation. This is important in order to bestow legitimacy to them in the eyes of administrators. South Africa too has issues, but may not be as technically and financially constrained as the other two states. All three states evidence a weak system for review of MPA governance and evaluating management effectiveness. Mozambique and Tanzania also have weaknesses relating to access and dissemination of information to the public, uneven enforcement capabilities, and insufficiently clear conflict management processes. The consultative processes that the three states have in place suggest that a consultation process for the purpose of establishing a regional MPA network or transboundary MPAs will be a long one.

To further reinforce the national governance frameworks surveyed in this article as legal infrastructure for a transboundary MPA network and transboundary MPAs in their border regions, the three states should consider developing legal provisions to properly mandate the respective authorities with responsibilities for the establishment and management of such transboundary arrangements. Although the legislation on domestic MPA making is clear, there is less clarity with reference to cooperative MPA making. This would be innovative legislation, which would, inter alia, further facilitate cross-border scientific exchanges, stakeholder participation, and surveillance and enforcement. In particular, the designation of transboundary MPAs is likely to benefit from better definition of domestic lead roles for initiating the dialogue leading to a transboundary MPA designation and eventually for continued management. Even in the event that the three states agree to establish joint commissions or similar unified structures for the management of transboundary MPAs in the two border regions, it will be important to have provisions for the definition of the roles of domestic institutions whose cooperation will be needed in what essentially will be international initiatives.

Beyond the domestic governance infrastructure, cooperation on MPAs will require a diplomatic process that was not studied in this article. The three states boast substantial international experience in transboundary resource conservation and cooperation (Guerreiro et al. 2009). Although this relates primarily to terrestrial contexts, there is likely much that is transferable to marine environmental cooperation such as the diplomatic processes involved, the consequential interbureaucratic cooperation required on an ongoing basis, and the range of options in achieving acceptable joint outcomes. The practice on regional MPA networks

elsewhere shows that international legal agreements and a strong coordinating framework are likely to facilitate progress (UNEP/WCMC 2008). Mozambique, South Africa, and Tanzania have the capacities and aptitudes necessary to enter into bilateral, and possibly subregional arrangements, a good augur for an East African regional transboundary MPA network.

## Conclusion

As Mozambique, South Africa, and Tanzania further engage in dialogue on marine conservation cooperation, to the point of scaling up their cooperation to a regional MPA network and transboundary MPAs in their border regions, they will need to consider how their domestic governance frameworks facilitate or constrain their cooperation. Although on many issues, there appears to be regional solidarity and a convergence on principles, there are significant differences concerning lead roles and institutional structures, access to public information, and conflict management, among others, which would need to be factored in MPA cooperation. Other important factors for regional MPA cooperation include policy directions on shared concerns such as conservation and development values, with an emphasis on equitable resource use and poverty alleviation. The three states have the political will to address the difficult balance they need to strike between poverty and conservation at the domestic level. Their added challenge will be to address that balance at a regional level.

## Postscript

In October 2009 the transboundary MPA between Mozambique and South Africa discussed in this article came into existence with Mozambique's announcement of the Ponta de Ouro Marine Reserve. The MPA on the Mozambique side includes Ponta de Ouro, Inhaca, Portuguese Islands and Maputo Special Reserve to a seaward extent of three nautical miles and collectively covering an area of 678 $km^2$. The area has been placed on the tentative list for eventual proposal for World Heritage Site status. This MPA now links with the iSimangaliso Wetland Park on the South African side of the maritime boundary and the two MPAs together extend for 300 km. The transboundary MPA is one of five areas under the Lubombo Transfrontier Conservation Area Protocol and is considered to be the first in the African region. (iSimangaliso News & Info, online: http://isimangalisonews.wordpress.com/2009/10/29/mozambique-and-sa-link-hands-across-sea-creating-africa%e2%80%99s-largest-marine-protec-ted-area/).

## Notes

1. Convention on Biological Diversity, 5 June 1992, 1760 *U.N.T.S.* 142.

2. Convention on Biological Diversity, COP 7, Kuala Lumpur, 9–20 February 2004, Decision VII/28, available at http://www.cbd.int/convention/results/?id=7742&kw=2012&l0=MAR&l3=COP-07&t0=2012.

3. An *MPA network* is understood as "a collection of individual MPAs or reserves operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels that are designed to meet objectives that a single reserve cannot achieve" (IUCN/WCPA 2008, at 11). A Food and Agriculture Organization of the United Nations (FAO) workshop on MPAs in fisheries management considered the concept of "network" at three levels: "at a minimum, more than one MPA; more usefully, a collection of MPAs either as representative networks and/or with some degree of connectivity which could be ecological or social, including sharing of governance resources; ideally,

a synergistic system of MPAs with the 'whole greater than the sum of the parts' relative to objectives" (FAO 2006, at 5).

4. Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region, 21 June 1985, available at sedac.ciesin.org/entri/texts/EastAfrPro.html.

5. A *transboundary MPA* is understood as an MPA that is jointly established by neighboring states and whose area straddles their common maritime boundary. In the absence of a delimited maritime boundary, the transboundary MPA may cover areas (whether in dispute or not) where a maritime boundary might be potentially delimited.

6. Convention on Wetlands of International Importance especially as Waterfowl Habitat, 2 February 1971, 996 *U.N.T.S.* 245.

7. Convention Concerning the Protection of the World Cultural and Natural Heritage, 16 November 1972, 1037 *U.N.T.S.* 151.

8. United Nations Convention on the Law of the Sea, 10 December 1982, 1833 *U.N.T.S.* 396. The conditions and procedure for the adoption of special mandatory measures are set out in art. 211(6).

9. Convention on Biological Diversity, supra note 1.

10. Convention on the Conservation of Migratory Species of Wild Animals, 23 June 1979, 1651 *U.N.T.S.* 355.

11. Agreement on the Conservation of African-Eurasian Migratory Waterbirds, 16 June 1995, *U.K.T.S.* 2003 No. 13.

12. Convention on the Protection of the Underwater Cultural Heritage, 2 November 2001, 41 *I.L.M.* 40. This convention entered into force on 2 January 2009.

13. Convention on International Trade in Endangered Species of Wild Fauna and Flora, 3 March 1973, 993 *U.N.T.S.* 243.

14. International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 Relating Thereto, 17 February 1978, 1340 *U.N.T.S.* 61.

15. International Convention for the Regulation of Whaling, 2 December 1946, 161 *U.N.T.S.* 73.

16. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 29 December 1972, 1046 *U.N.T.S.* 137.

17. Convention on the Law of Non-navigational Uses of International Watercourses, 21 May 1997, G.A. Res. 51/229, U.N. GAOR, 51st sess., 99th mtg., UN Doc A/RES/51/229.

18. International Convention on Oil Pollution Preparedness, Response and Co-operation, 30 November 1990, 1891 *U.N.T.S.* 77.

19. Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi Convention), [1986] O.J.C. 253/10, 46 *I.E.L.M.T.* 985.

20. Nairobi Wildlife Protocol, supra note 4.

21. Constitutive Act of the African Union, 11 July 2000, 2158 *U.N.T.S.* 33.

22. Treaty Establishing the African Economic Community, 3 June 1991, 30 *I.L.M.* 1241.

23. Treaty of the Southern African Development Community, 17 August 1992, 32 *I.L.M.* 116.

24. Protocol on Wildlife Conservation and Law Enforcement, 18 August 1999, available at http://www.sadc.int/index.php?action=a1001&page_id=protocols_wildlife.

25. Southern African Development Community Protocol on Fisheries, 14 August 2001, available at http://www.sadc.int/index.php?action=a1001&page_id=protocols_fisheries—0 (21 August 2005).

26. African Convention on the Conservation of Nature and Natural Resources, 15 September 1968, 1001 *U.N.T.S.* 3.

27. African Convention on the Conservation of Nature and Natural Resources, 11 July 2003, available at http://www.africa-union.org/Official_documents/Treaties_Conventions_Protocols/ nature and natural recesource.pdf.

28. Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora, 8 September 1994, 1950 *U.N.T.S.* 35.

29. For example, in the two border regions considered candidates for transboundary MPAs in this article, there are well-established domestic MPAs: Tanzania, Mnazi Bay; Mozambique, Quirimbas and Inhaca Island; and South Africa, iSimangaliso.

30. Treaty Between the Government of the Republic of Mozambique, the Government of the Republic of South Africa and the Government of the Republic of Zimbabwe on the Establishment of the Great Limpopo Transfrontier Park, 9 December 2002, available at http://www.tbpa.net/docs/treaties_MOUs/GreatLimpopo_InternationalTreatyFinalNov2002.pdf.

31. General Transfrontier Conservation and Resource Area Protocol Between the Government of the Republic of South Africa, the Government of the Republic of Mozambique and the Government of the Kingdom of Swaziland, 22 June 2000, available at http://www.scribd.com/doc/6805890/L-TFCAGeneral-Protocol-Signed-on-22-June-2000.

32. Bilateral Agreement Between the Government of the Republic of Botswana and the Republic of South Africa on the Recognition of the Kgalagadi Transfrontier Park, 7 April 1999, available at http://www.tbpa.net/docs/treaties_MOUs/KgalagadiAgreement.pdf.

33. Treaty Between the Government of the Republic of Namibia and the Government of the Republic of South Africa on the Establishment of the [|Ai-|Ais/Richtersveld] Transfrontier Park, 1 August 2003, available at http://www.tbpa.net/docs/treaties_MOUs/TFP_AI-AIS-RICHTERVELD.pdf.

34. Tripartite Interim Agreement Between the Republic of Mozambique and the Republic of South Africa and the Kingdom of Swaziland for Co-operation on the Protection and Sustainable Utilisation of the Water Resources of the Incomati and Maputo Watercourses, 29 August 2002, available at faolex.fao.org/cgi-bin/faolex.exe?rec_id=029794&database=FAOLEX&search_type=link&table=result&lang=eng&format_name=@ERALL.

35. South African Development Community Revised Protocol on Shared Watercourses, 7 August 2000, 40 *I.L.M.* 317.

36. World Heritage Convention, supra note 7.

37. Convention on International Trade in Endangered Species, supra note 13.

38. Nairobi Convention, supra note 19.

39. Two of these, although coastal, are cultural sites: Stone Town of Zanzibar, a historic Swahili coastal trading center; and the Ruins of Kilwa Kisiwani and Songo Mnara, consisting of remains of historic East African ports dating back to the thirteenth and sixteenth centuries.

40. CBD COP7 Decision, supra note 2.

41. UNCLOS, supra note 8.

42. *Ibid.*, arts. 5–14.

43. Agreement Between the Government of the United Republic of Tanzania and the Government of the People's Republic of Mozambique Regarding the Tanzania/Mozambique Boundary, 28 December 1988, available at http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/TZA-MOZ1988TM.PDF.

44. UNCLOS, supra note 8, Art. 15.

45. Writing on ocean policy analysis, Underdal and Miles proposed four key questions; namely, What do we want? What should we want given our biophysical conditions? Why? How do we get there and what are we prepared to pay to get there? (Underdal 1980; Miles 1992). This analytical approach is also applicable to analysis of MPA policies.

46. At the end of 2008, none of the three states ranked in the "high human development" category of the Human Development Index. South Africa (125) and Tanzania (152) are in the medium rank, and Mozambique (175) is in the low development rank, out of 179. UNDP, Human Development Reports (2008), available at hdr.undp.org/en/statistics/.

47. A distinction is maintained between marine parks and marine reserves. A *marine reserve* is an area where some resource use is permitted, but subject to restrictions. A *marine park* is a type of reserve where community use and habitation are permitted on the basis of a strict zonation scheme and participatory management. Marine Parks and Reserves, Tanzania, available at www.marineparktz.com/faq.htm.

48. Tsistikamma National Park in South Africa was proclaimed as an MPA (marine national park) in 1964. It is a no-take zone and extends seaward by 5 kilometers to include intertidal life, reefs, and deep sea fish. South Africa National Parks, available at http://www.sanparks.org/parks/tsitsikamma/tourism/history.php.

49. As reported by Ministério para a Coordenação da Acção Ambiental, Centro de Desenvolvimento Sustentável para as Zonas Costeiras, available at http://www.zonascosteiras.gov.mz/article.php3?id_article=5.

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